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Interpretation of Variation of Partial Moral Volume of Solute with Aqueous Solutions of Strong Electrolytes (Abstract)

G. W. Stewart
State University of Iowa

INTERPRETATION OF VARIATION OF PARTIAL MOLAL VOLUME OF THE SOLUTE WITH AQUEOUS SOLUTIONS OF STRONG ELECTROLYTES

(ABSTRACT)

G. W. STEWART

One view is that the variation in the partial molal volume of water is produced by a change in its structure from a four-coordinated to a higher one. This view receives corroboration from experiments with the x-ray diffraction pattern of aqueous ionic solutions of thirty-one strong electrolytes. The results show a correspondence between the rate of variation of (1) the partial molal volume with concentration of the electrolyte; and (2) the liquid structure of the water also with concentration.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

RIGIDITY MODULUS OF LEAD SINGLE CRYSTALS

(ABSTRACT)

IRVIN H. SWIFT

The isothermal rigidity modulus has been measured for lead crystals of various orientations. The reciprocal bending-torsion effect and its influence on the measurement are considered.

STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

AN ELECTRICAL CIRCUIT DESIGNED FOR USE IN A CALCULATING INSTRUMENT

(ABSTRACT)

RAY WENDLAND

Mathematical analysis of the potential variation produced by a circuit comprising two slide wire resistors (potentiometers) linked in parallel revealed the possibility of compensating the circuit so as to provide a potential varying as the product of the resistances in the individual slide wires. The problem was to counteract the fall in potential produced when a resistor is placed across a potentiometer circuit delivering an initial potential, E_0.